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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/016,777	12/10/2001	Ameel M. Kamboh	2204/B10	3363

34845 7590 02/28/2006

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EXAMINER

SWEARINGEN, JEFFREY R

ART UNIT	PAPER NUMBER
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2145

DATE MAILED: 02/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/016,777

Applicant(s)

KAMBOH ET AL.

Examiner

Jeffrey R. Swearingen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. The objections to the specification and claim 10 are withdrawn.
2. The rejections to claims 3, 13, and 16 under 35 U.S.C. 112, second paragraph are withdrawn.
3. Applicant's arguments with respect to claims 1-19 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
6. Claim 5 recites the limitation "the memory" in claim 1. There is insufficient antecedent basis for this limitation in the claim. For purposes of compact prosecution, claim 5 is treated as being dependent upon claim 4.

Claim Rejections - 35 USC § 101

7. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.
8. Claims 1-3, 7-10 and 13-18 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The subject matter is not limited to statutory embodiments. Applicant admitted in the remarks of 5 November 2005 that the "invention 'may be embodied in ... forms including ... computer program logic for use with a processor'". Applicant stated that the invention was computer program logic. Computer program logic for use with a processor does not necessitate that the computer program logic is used with a processor. Applicant stated that the "computer program may be fixed in any form in a signal that is transmittable to a computer using any of various communication

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technologies, including, but in no way limited to, analog technologies, digital technologies, optical technologies, wireless technologies, and internetworking technologies. The computer program may be distributed ... from a server or electronic bulletin board over the communication system (e.g., the Internet or World Wide Web). Specification, pages 11-12. The computer program making up the device, apparatus, and communication system of claims 1, 9 and 14 respectively therefore was not limited to tangible embodiments, and as such is non-statutory. Computer programs must strictly be embodied on tangible, physical media such as memory and storage media.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Culler et al. (Parallel Computer Architecture: A Hardware/Software Approach, 1999).

11. In regard to claims 1, 9 and 14, Culler disclosed *at least one interface for receiving and transmitting data packets; a set of routing processors coupled to the at least one interface, including a first routing processor exclusively associated with a first routing protocol for determining a set of routes, and a second routing processor exclusively associated with a second routing protocol for determining a set of routes; and a routing table manager coupled to the set of routing processors, for maintaining a forwarding table of routes provided by the set of routing processors*. Sections 10.6 and 10.7 of Culler disclosed the design of switches for routing packets based upon the port specified in the message. One of ordinary skill in the art would recognize different protocols defined by different TCP/IP ports (e.g. SMTP on port 25, HTTP on port 80). Throughout section 10.6, Culler showed that processors were affiliated with each port output of the described switches. The routing table manager was presented as an example on page 790, second full paragraph.

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12. In regard to claims 2 and 15, Culler further disclosed *a set of fast forward engines coupled to the at least one interface and the routing table manager for forwarding a data packet based on the forwarding table*. Section 10.6.7 taught forwarding packets using a routing table. The *fast forward engines* forwarded the packet.

13. In regard to claims 3, 13 and 16, *the routing table manager is exclusively associated with a third processor* was taught on page 790, second full paragraph.

14. In regard to claims 4, 5, 6, 11, 12 and 19, memory was inherent to the Culler system.

15. In regard to claims 7 and 17, Culler further disclosed *a control data module coupled to the at least one interface for receiving and processing control data messages from a control data bus; and a routing data module coupled to the at least one interface and the set of routing processors for receiving and processing routing data messages from a routing data bus*. The presence of flow control in 10.8.2 made a *control data module for receiving and processing control data messages* a part of the Culler teachings. The routing data module was shown on page 790, second full paragraph.

16. In regard to claims 8 and 18, the combination of the *control data module and the routing data module* on the same processor was inherent to Culler, since Culler taught processors for each outgoing port and the flow control and routing for each port (shown in section 10.6.7 and 10.6 respectively) were affiliated with all ports, and therefore inherently were present on the same processor.

17. In regard to claim 10, *a routing table manager coupled to the set of routing protocol processors for updating the forwarding table* was shown on page 790, second full paragraph.

Conclusion

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

19. Estrin, D. et al. "Source Demand Routing: Packet Format and Forwarding Specification (Version 1)." RFC 1940. May 1996.

20. Srinivasan, V. et al. "Fast and Scalable Layer Four Switching". ACM SIGCOMM Computer Communication Review. Volume 28, Issue 4, pp. 191-202. October 1998.

21. Bhardwaj

U.S. Patent No. 5,274,631

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|-----|--------------------|---------------------------|
| 22. | Murthy et al. | U.S. Patent No. 5,515,376 |
| 23. | Liu et al. | U.S. Patent No. 5,530,703 |
| 24. | Hardwick et al. | U.S. Patent No. 5,550,816 |
| 25. | Bakke et al. | U.S. Patent No. 5,566,170 |
| 26. | Picazo, Jr. et al. | U.S. Patent No. 5,720,032 |
| 27. | Bellenger | U.S. Patent No. 5,802,054 |
| 28. | Muller et al. | U.S. Patent No. 5,909,686 |
| 29. | LeMaire et al. | U.S. Patent No. 5,999,530 |
| 30. | Khaki et al. | U.S. Patent No. 6,067,569 |
| 31. | Clarke, Jr. et al. | U.S. Patent No. 6,085,235 |
| 32. | Shand et al. | U.S. Patent No. 6,147,976 |

33. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey R. Swearingen whose telephone number is (571) 272-3921. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Cardone can be reached on 571-272-3933. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jason Cardone
Supervisory Patent Examiner
Art Unit 2145